Frank B. Sykora

Serial No.:

10/694,064

Page No.:

2

CLAIMS

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

-1- through -22- (Cancelled)

-23- (Withdrawn)

A long-wear interface assembly comprising:

a first member;

a second member mounted adjacent said first member, said second member capable of movement relative to said first member, said first member including a surface engaging said second member, said surface coated with a diamond-like coating, said second member including a polymeric material engaging said surface coated with said diamond-like coating.

-24- through -28- (Cancelled)

-29- (Currently Amended)

A bearing assembly comprising:

a first part defining an annular raceway;

a second part defining an annular raceway and being disposed adjacent to said first ring part;

a plurality of bearings disposed between said first part and said second part, said bearings riding within said raceways and permitting relative movement between said first part and said second part, either of said bearings or said raceways including a polymeric material and

Frank B. Sykora

Serial No.:

10/694,064

Page No.:

3

the other being coated with a diamond-like coating, whereby said polymeric material engages said coating at an interface between said bearings and said raceways.

The bearing assembly of claim 29 wherein said bearings are coated with said diamond-like coating and said raceways include said polymeric material, said bearings engaging and riding along said polymeric material.

The bearing assembly of claim 30 wherein at least one of said first part and said second part is manufactured from said polymeric material.

The bearing assembly of claim 30 wherein at least one of said first part and said second part includes a bushing defining said raceway, said bushing being manufactured from said polymeric material.

The bearing assembly of claim 29 wherein said bearings are manufactured from said polymeric material and said raceways are coated with said diamond-like coating.

A chain for a roller chain conveyor comprising:

a male link;

a female link mounted to said male link by a connector member, said connector member including a shaft, said shaft being coated with a diamond-like coating;

Frank B. Sykora

Serial No.:

10/694,064

Page No.:

4

a roller rotatably mounted to said connector member with said male link and said female link; and

a polymeric bushing fitted within said roller, said bushing surrounding said shaft, such that said coating directly interfaces with said bushing.

-35- (Withdrawn)

The chain of claim 34 wherein said bushing includes an end portion protruding axially from said roller, said male link including a plate defining a void fitted over said end portion of said bushing.

-36- (Withdrawn)

The chain of claim 35 wherein said diamond-like coating is a thin, carbon film coating.

-37- (Withdrawn)

The chain of claim 36 wherein- said bushing is manufactured from a polymeric material containing strength and rigidity enhancing additives.

-38- (Withdrawn)

The chain of claim 36 wherein said bushing is manufactured from a nylon containing Molybdenum disulphide.

-39- (New)

A long wear bearing assembly comprising:

an inner ring;

an outer ring; and

Frank B. Sykora

Serial No.:

10/694,064

Page No.:

5

a plurality of bearings disposed between said inner ring and said outer ring and engaging said first part and said second part, said inner ring and said outer ring capable of rotating with respect to one another along the bearings, one of said inner and outer rings or said bearings including a polymeric material and the other coated with a diamond-like coating to provide a long wear interface between said bearings and said inner and outer rings.

The long wear bearing assembly of claim 39, wherein said first ring and said second ring are manufactured from said polymeric material and said bearings are coated with a diamond-like coating.

The long wear bearing assembly of claim 30, wherein said first ring and said second ring include polymeric bushings contacting said bearings, and wherein said bearings are coated with a diamond-like coating.

A bearing assembly comprising:

a plurality of bearings; and

a housing defining an opening to receive said bearings, said opening having a surface engaging said bearings, said bearings capable of rolling along said surface, one of said surface or said bearings including a polymeric material, and the other including a diamond-like coating, said polymeric material engaging said polymeric material as said bearings roll along said surface.

Frank B. Sykora

Serial No.:

10/694,064

Page No.:

6

-43- (New)

The bearing assembly of claim 42 wherein said housing includes an inner component and an outer component, said opening defined between said inner component and said outer component, said outer component movable with respect to said inner component.

-44- (New)

The bearing assembly of claim 43 wherein said inner component and said outer component are comprised of a polymeric material and said bearings are coated with a diamond like coating.

-45- (New)

The bearing assembly of claim 43 wherein said inner and outer components each include a polymeric bushing comprising said surface engaging said bearings and said bearings are coated with a diamond-like coating.

-46- (New)

The bearing assembly of claim 42 wherein said bearings are comprised of a polymeric material and said surface is coated with a diamond-like coating.